

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

ALABAMA SECTION.

PATRICK H. SMYTH, Meteorologist.

VOL. XXII. MONTGOMERY, ALA., OCTOBER, 1916. No. 10.

GENERAL SUMMARY.

The temperature for the month for the State as a whole averaged slightly above the normal. Frost occurred generally over the State south to the Gulf coast during the 21st-23d. The first killing frost of the season occurred at Ashville and Madison on the 20th and killing frost was reported at a number of stations, especially in the northern portion, during the 21st-23d.

Precipitation was generally deficient, there being only five stations with amounts slightly in excess of the normal. The bulk of the month's rainfall attended the passage of a tropical storm from the Gulf of Mexico northward over western Alabama and eastern Mississippi on the 18th. The passage of this storm was marked by unprecedentedly high winds in the coast and southeastern counties. The maximum velocity at Mobile was 115 miles per hour, from the east, at 8.25 a. m., which is the highest of record for the State. The damage along the Gulf coast was remarkably slight, considering the velocity of the wind; the damage appears to have been greatest in Dale, Coffee, and Covington counties, where much timber was blown down, several houses were demolished, and at least two persons killed.

On the afternoon of the 18th, at about 4 o'clock, an earthquake was felt throughout the northern and east-central portions and much of the southeastern portion of the State. Its effects seem to have been most pronounced in eastern Jefferson, southwestern St. Clair, and northern Shelby counties, where at some places chimneys were shaken down.

The Alabama and Tombigbee rivers and tributaries were at low stages during the month.

At the close of the month much cotton remained ungathered in the northern counties. Corn, sweet potatoes, peanuts, and nearly all other staple crops were practically harvested in most sections. Planting of oats and wheat was progressing slowly. Prospects were promising for a good crop of satsuma oranges.

PRESSURE.

The mean sea-level atmospheric pressure, determined from the records of four regular Weather Bureau stations, was 30.09 inches. The highest recorded was 30.38 inches on the 23d at Anniston; the lowest was 29.22 inches on the 18th at Mobile.

TEMPERATURE.

The mean temperature for the State, determined from the records of 47 stations, was 64.8°, or 0.7° above the normal, and 2.3° less than the mean for October, 1915. The highest local monthly mean was 69.7° at Daphne, Baldwin County; the lowest was 58.8° at Riverton, Colbert County. The highest temperature was 97° at Auburn, Lee County, on the 9th; the lowest was 26° at Florence, Lauderdale County, and Hamilton, Marion County, on the 22d, making the monthly range for the State 71°. The greatest daily range was 52° at Florence, Lauderdale County, on the 4th.

HUMIDITY.

The average relative humidity at 7 a. m., determined from the records of four regular Weather Bureau stations, was 78 per cent; at 7 p. m., from records of three stations, 59 per cent.

PRECIPITATION.

The monthly average for the State, determined from the records of 62 stations, was 1.74 inches, or 0.88 inch less than the normal, and 3.19 inches less than for October, 1915. The greatest monthly amount was 5.00 inches at Robertsdale, Baldwin County; the least was 0.08 inch at Scottsboro, Jackson

County. The greatest amount that fell in any 24 consecutive hours was 4.85 inches at Robertsdale, Baldwin County, on the 18th. Precipitation amounting to 0.01 inch or more fell on an average of 3 days.

WIND.

The prevailing direction of the wind was northeast. The average hourly velocity, determined from the records of four regular Weather Bureau stations, was 7.2 miles. The highest velocity recorded was 115 miles per hour, from the east, on the 18th, at Mobile.

SUNSHINE AND CLOUDINESS.

The average sunshine, determined from the records of four regular Weather Bureau stations, was 78 per cent of the possible amount. The average number of clear days for the State was 19; partly cloudy, 7; cloudy, 5.

MISCELLANEOUS PHENOMENA.

(Dates and number of stations reporting.)

Fog.—3d, 2; 7th, 1; 9th, 7; 10th, 1; 12th, 1; 16th, 2; 22d, 1; 23d, 1; 24th, 5; 25th, 1; 26th, 1; 30th, 4; 31st, 14.

Frost, first killing.—20th, 2 (Ashville, Madison); 21st, 11 (Benton, Florence, Hamilton, Healing Springs, Livingston, Opelika, Riverton, Scottsboro, Selma, St. Bernard, Valley Head); 22d, 12 (Anniston, Calera, Camp Hill, Clanton, Cochran, Evergreen, Greensboro, Oneonta, Pushmataha, Talladega, Uniontown, Wetumpka); 23d, 1 (Monteale).

Thunderstorms.—9th, 3; 16th, 1; 18th, 2.

Earthquakes.—18th, 43.

COMPARATIVE STATE DATA FOR OCTOBER.

Year.	Temperature.				Precipitation.		Number of days.			Prevailing direction of wind.	
	Mean.	Departure.	Highest.	Lowest.	Average.	Departure.	With precipitation (0.01 inch or more).	Clear.	Partly cloudy.		Cloudy.
1896	63.2	-1.6	98	26	2.27	-0.20	4	16	8	7	aw.
1897	67.2	+4.2	97	30	1.34	-0.74	3	22	4	4	n. e.
1898	61.3	-1.8	96	24	4.22	+2.18	6	18	5	8	n. n.
1899	68.2	+3.3	92	29	2.18	+0.08	4	18	7	6	e. e.
1900	68.8	+5.4	98	44	5.64	+3.37	6	13	6	12	e. n.
1901	62.7	-1.2	92	31	1.04	-1.65	2	24	4	3	e. e.
1902	63.4	-0.4	95	26	3.58	+0.80	4	16	6	9	n. n.
1903	63.4	-0.6	97	32	1.82	-0.66	4	21	6	4	n. n.
1904	64.6	+0.7	101	25	0.34	-1.15	2	25	4	2	n. n.
1905	64.1	0.0	91	30	4.39	+2.16	8	13	6	12	e. n.
1906	61.1	-2.7	90	25	3.54	+0.96	5	16	5	10	n. n.
1907	63.4	-0.5	95	26	1.44	-1.16	4	18	6	6	n. n.
1908	60.4	-3.4	92	27	1.76	-0.49	2	21	3	7	n. n.
1909	63.9	0.0	96	25	1.59	-0.86	3	24	4	3	n. n.
1910	66.7	+3.0	98	21	3.20	+0.68	6	19	5	5	n. n.
1911	68.6	+4.8	101	30	3.12	+0.51	0	15	7	7	n. n.
1912	65.4	+2.1	98	29	2.95	+0.49	5	15	6	9	n. n.
1913	61.4	-2.8	94	19	2.18	-0.30	5	18	6	7	n. n.
1914	64.2	+0.1	90	24	2.88	+0.43	6	14	6	10	n. n.
1915	67.1	+3.1	94	28	4.93	+2.48	8	17	3	7	n. n.
1916	64.8	+0.7	97	26	1.74	-0.88	3	19	7	5	ne.

RIVER DATA FOR OCTOBER, 1916.

Stations.	Gage heights—feet.						Precipitation (inches).
	Flood stage.	Mean stage.	High-est.	Date.	Low-est.	Date.	
<i>Alabama River and tributaries.</i>							
Canton, Ga.	20	1.1	2.0	19†	1.0	17	3.35
Resaca, Ga.	25	2.7	4.0	10†	2.0	14†	2.85
Rome, Ga.	30*	6.3	7.4	20†	5.9	16†	1.75
Gasden, Ala.	22	1.8	3.4	22	1.3	17†	1.85
Lock No. 4, Ala.	17	1.1	2.5	14	0.7	16†	0.35
Wetumpka, Ala.	45	3.7	6.8	20	1.0	30	1.63
Montgomery, Ala.	40	2.6	5.0	20	1.4	5	2.29
Selma, Ala.	35	1.4	4.3	21	0.6	17	1.75
Selma, Ala.	35	2.3	5.9	22	0.6	18	1.11
<i>Tombigbee River and tributaries.</i>							
Abardeen, Miss.	33	-1.0	-0.4	22	-1.3	17	1.16
Columbus, Miss.	33	-2.8	-2.5	22†	-3.1	11†	0.83
Cochran, Ala.	41	1.5	2.2	25	1.2	13†	0.60
Demopolis, Ala.	39	8.8	9.0	25†	8.6	9†	0.53
Tuscaloosa, Ala.	46	7.3	7.6	19†	7.2	5†	1.11

† Also other dates.

Climatological data for October, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				Number of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Snowfall (unmelted).	With precipitation (0.01 inch or more).	Clear.	Partly cloudy.		Cloudy.	Prevailing direction of wind.
<i>Northern Division.</i>																				
Anniston	Calhoun	728	25	63.9	+1.5	87	9	29	22	36	-1.38	-0.96	0.89	0	3	21	5	5	e.	U. S. Weather Bureau, Belton B. Cather.
Ashville	St. Clair	685	23	64.8	+3.5	96	8	29	21	45	1.40	-1.29	1.40	0	1					
Birmingham	Jefferson	701	28	65.6	-1.2	89	8	33	12	33	0.83	-1.51	0.75	0	4	20	8	3	e.	U. S. Weather Bureau, R. L. Moore.
Bridgeport	Jackson	660	16								2.37	-0.82	1.49	0	4					
Calera	Shelby	506	15								2.75	+0.07	1.85	0	2	23	4	4	e.	D. W. Boyd.
Coehrane	Pike	183	6								0.60		0.55	0	2					
Corlova	Walker	834	25	63.4	+1.7	89	7	32	21	40	1.49	-1.05	0.54	0	4	17	10	4	w.	T. H. G. Cook, Scott Maxwell.
Decatur	Morgan	573	37	62.3	+0.7	92	9	31	22	48	1.31	-1.20	0.55	0	5	16	9	6	se.	A. H. Irons.
Florence	Lauderdale	574	32	60.8	-1.1	94	7	26	22	52	1.62	-0.29	0.50	0	6	24	0	3		O'Ella O. Coburn.
Gadsden	Etowah	621	32	63.9	+1.7	89	9	32	22	38	1.85	-0.74	0.85	0	5	13	11	4	ne.	D. P. Goodhue.
Goodwater	Coosa	826	21	60.4	-3.5	88	9	31	22	37	2.12	-0.27	1.02	0	4					
Guntersville	Marshall	580	11								1.88	+1.09	0.97	0	6					
Hamilton	Marion		20	62.2	+0.2	93	9	26	22	48	1.39	-1.24	0.60	0	6					
Lock No. 4	Talladega	916	24	63.9	+1.1	92	9	31	22	39	0.95	-1.43	0.65	0	3					
Madison	Madison	573	22								1.42	-1.70	0.64	0	3	13	4	14		Miss Daisy Bulce, L. S. Long, Prof. H. O. Sargent, U. S. Engineers, James H. Landers.
Maple Grove	Cherokee		23	61.6	+0.9	91	15	31	20	41	1.70	-0.85	0.95	0	3	14	13	4	ne.	Mrs. A. L. Aubrey, F. Mason.
Mentone	DeKalb	1,595	9								2.88		1.95	0	3					
Oneonta	Blount	857	22	61.8	+1.2	91	9	27	22	41	1.04	-1.56	0.75	0	4	17	1	13	n.	Aviella J. Ketchum, James F. Long.
Hiverton	Colbert	360	19	58.8	-2.4	88	6	29	22	47	1.54	-1.36	0.40	0	7					
Scottsboro	Jackson	652	34	61.1	+0.7	88	6	29	22	47	0.08	-2.27	0.08	0	1	19	0	12	e.	Miss Eva Caldwell.
St. Bernard	Cullman	802	8	60.6		89	7	27	21	46	1.67		0.50	0	6	17	11	3	se.	Rev. Wm. Geis.
Talladega	Talladega	554	27	62.1	-1.3	87	8	29	22	38	0.88	-1.26	0.50	0	2	21	5	3	n.	J. W. Vandiver.
Tuscaloosa	Tuscaloosa	230	35	65.6	+2.1	90	6	32	22	42	1.11	-0.81	0.55	0	3					
Tuscumbia	Colbert	438	34	60.6	-0.8	90	11	31	22	48	1.64	-0.58	0.62	0	5	17	9	3	se.	W. S. Wymann, Samuel Moore.
Valley Head	DeKalb	1,031	31	62.6	+2.6	90	7	29	21	42	2.15	-0.76	1.75	0	2	24	4	3	s.	M. T. Floyd, M. D.
Division means and extremes				62.4	+0.5	96	8	26	22	52	1.52	-1.04	1.96	0	4	19	6	6	e.	
<i>Southern Division.</i>																				
Alaga	Houston	105	11								1.14	-2.53	1.08	0	2					
Auburn	Lee	732	37	68.0	+3.7	97	9	37	21	35	1.56	-1.25	1.48	0	4	17	5	9	ne.	W. J. Parrish, Dr. James T. Anderson.
Bay Minette	Baldwin	268	2	68.2		89	9	38	22	31	4.65		2.40	0	3	20	2	9	n.	Newport Turn. & Rosin Co.
Benton	Lowndes	149	15								0.95	-1.40	0.86	0	2	25	5	1	w.	S. T. Pruitt.
Bermuda	Conecuh	379	29	66.2	+1.6			30	21		1.35	-1.08	1.30	0	2					John M. Conner.
Camp Hill	Tallahassee	728	15	65.6	+1.2	94	9	31	22	35	2.00	-0.05	2.00	0	1	15	14	2	s.	Dr. Lyman Ward.
Clonelle	Mobile	331	28	69.2	+1.1	91	9	37	21	37	1.15	-1.86	0.65	0	4	23	4	4	n.	Rev. W. H. Rowe.
Clanton	Chilton	500	23	64.6	+1.4	93	9	31	22	41	1.23	-1.09	0.98	0	3	20	6	5	n.	Joseph B. Downs.
Dadeville	Tallahassee	760	11								2.10	-0.32	2.00	0	2					
Daphne	Baldwin	25	669.7	+1.1		91	6	40	22	35	4.00	-0.07	3.10	0	4	24	5	2	ne.	Dr. A. B. Fulton, John H. Young.
Demopolis	Barbour	110	24								0.59	-1.56	0.26	0	4					
Etowah	Barbour	200	32	65.3	+0.5	86	10	35	22	32	1.58	-0.76	1.43	0	5					
Evergreen	Conecuh	285	32	67.8	+2.8	96	9	32	22	44	1.74	-0.26	1.59	0	3					
Floaton	Escambia	91	25	66.4	+0.4	93	9	31	22	41	2.05	-0.39	1.75	0	5	27	1	3	n.	George W. Whitlock, George W. Sutter, jr., G. M. Reid.
Fort Deposit	Lowndes	520	32	65.7	+0.8	90	9	35	22	35	2.01	-0.24	1.27	0	6					J. F. Hattenber.
Greensboro	Hale	220	44	64.4	0.0	89	9	34	22	32	0.56	-1.55	0.36	0	2	22	0	9	e.	W. E. W. Yerby.
Greenville	Butler	444	15								1.96	-0.03	1.54	0	2					
Healing Springs	Washington	362	13								1.10	-0.82	0.80	0	2	23	0	8		
Highland Home	Crenshaw	24	67.2	+0.8		89	9	39	21	29	3.73	+1.35	3.00	0	3	20	5	6	ne.	Prof. Samuel Jordan, Robert L. King.
Livingston	Sumter	160	32	63.2	-0.3	90	9	29	22	42	0.23	-1.82	0.18	0	2					
Milstead	Macon	43									2.29	+0.05	2.02	0	4					
Mobile	Mobile	81	44	68.8	+1.7	90	9	31	22	33	2.52	-0.66	2.00	0	2	21	6	4	n.	U. S. Weather Bureau.
MONTGOMERY	Montgomery	240	44	66.2	+0.5	90	9	38	22	30	1.75	-0.69	1.63	0	4	18	10	3	ne.	Do.
Opelika	Lee	817	37	65.9	+1.8	88	9	31	22	35	1.92	-0.99	1.55	0	3					
Ozark	Dale	400	14	68.1	+2.1	93	16	35	21	35	1.37	-1.17	0.88	0	9	15	10	6	sw.	A. H. Head, Miss Ella Q. N. Scott.
Prattville	Autauga	281	16	65.2	+1.0	90	9	31	22	38	1.43	-0.84	1.43	0	1	22	7	2	nw.	Joseph B. Bell.
Pashmataba	Choctaw		25	64.0	-0.5	88	6	31	22	42	0.54	-1.67	0.26	0	4	17	5	9	n.	W. N. Horn.
Robertsdale	Baldwin	148	4								5.00		4.85	0	3	23	5	3	ne.	Carl Buseck.
Selma	Dallas	147	41	64.2	-1.5	90	9	31	22	38	1.11	-0.94	0.94	0	3					
Spring Hill	Mobile	312	12	67.4		87	15	41	21	25	2.09		1.37	0	3	22	6	3	ne.	Charles F. Brislin, Spring Hill College.
Tallassee	Elmore		25								2.14	+0.11	1.89	0	4					
Thomasville	Clarke	385	25	62.8	-1.3	87	4	34	22	41	0.55	-1.28	0.55	0	1					
Troy	Pike	581	8	68.2		93	9	38	21	33	3.51		3.25	0	3	18	11	2	n.	Wilson Tucker.
Tuskegee	Macon		16	67.8	+0.4	95	10	38	23	37	3.08	+1.00	2.82	0	2	15	14	2	n.	Frank L. Zimmermann, Prof. G. W. Carver.
Union Springs	Bullock	216	29	65.4	+0.7	88	9	36	22	28	2.28	-0.69	2.20	0	2	18	11	2	e.	P. L. Cowan.
Uniontown	Perry	273	30	66.6	+0.2	90	6	34	22	39	0.80	-1.28	0.80	0	1	12	11	8	e.	L. H. Moore.
Wetumpka	Elmore	205	24	67.0	+0.8	96	9	33	22	42	1.63	-0.57	1.35	0	2	9	20	2	n.	Mrs. Emmie Callaway.
Division means and extremes				66.4	+0.8	97	9	29	22	44	1.88	-0.77	4.85	0	3	19	7	5	ne.	
State means and extremes				64.8	+0.7	97	9	26	22	52	1.74	-0.88	4.85	0	3	19	7	5	ne.	

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in computing section or division means.  
 Reference letters, a, b, c, appearing in the table indicate number of days missing; for example, b represents two days, etc.  
 † Also on other dates. †† Received too late to be included in means and summaries. ††† Post-office addresses of these stations are as follows: Of Lock No. 4, Laid-coin; of Maple Grove, Leesburg. T. Precipitation is less than 0.01 inch rain or melted snow.



Daily temperatures for October, 1916.

Table with columns for Stations, 1-31, and Mean. Rows are grouped into Northern Division and Southern Division, listing various Alabama locations and their daily temperature ranges.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from record. § Thermometers are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. ¶ No report received, or record incomplete.